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ABSTRACT

This digest provides a review of the research literature on assessment of the effectiveness of higher education in producing graduates with the knowledge and skills necessary for well-educated citizens today. Major findings are grouped as answers or partial answers to the following nine questions: (1) "what are the critical competencies and how do they develop?"; (2) "what are the effects of our curricula?"; (3) "how effectively do our courses develop students' intellectual abilities?"; (4) "how hard do students work?"; (5) "what do tests and grades tell us?"; (6) "how does the campus climate affect our students' development?"; (7) "how well do we guide our students' development?"; (8) "can today's students learn?"; and (9) "how can we improve the quality of the student outcomes we produce?" (Contains eight references.) (DB)

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Redesigning Higher Education Producing Dramatic Gains in Student Learning

Lion F. Gardiner

Since the late 1960s and early 1970s, American colleges and universities have been profoundly changed by the huge influx of "non-traditional" students who have increasingly characterized our campuses--women, people of color, and part-time and older students. Projections suggest our students will continue to increase in diversity far into the future.

How effectively are we educating our students? The research literature of higher education contains many valuable findings that can help us answer this question and provide essential guidance to significantly improve our students' learning.

What are the critical competencies and how do they develop? The skills and dispositions most frequently identified as essential to society's economic and democratic success by scholars and leaders in business and government include among them the capacities for critical thinking and complex problem solving, respect for people different from oneself, principled ethical behavior, lifelong learning, and effective interpersonal interaction and teamwork. These crucial skills and dispositions presuppose cognitive abilities studies have shown are poorly developed in many college and university students.

What are the effects of our curricula? Over 90% of our 3,600 college and universities use distribution systems of curriculum, in which students select courses from lists. Research reveals (1) men and women take significantly different courses, (2) groups of courses are correlated with gains, or declines, in specific competencies for groups of high and low ability students, and (3) student outcomes are not necessarily related to required courses. Thus, research has questioned the developmental value of distributional curricula. Types and breadth of courses available, specific courses in the curriculum, and degree of choice may make relatively little difference in educational outcomes, although a true-core curriculum, found in a few institutions, can be positively associated with many valued outcomes.

Overall, undergraduate liberal arts curricula tend to lack coherence and have limited breadth and depth. A liberal arts emphasis, however, as compared with more vocationally oriented curricula, can increase women's choice of gender atypical careers and black male choice of higher prestige, typically majority careers; reduce authoritarianism; and increase capacity for principled ethical reasoning.

How effectively do our courses develop students' intellectual abilities? Faculty aspire to develop students' thinking skills, but research consistently shows that in practice we aim at facts and concepts in the disciplines. Although active student involvement is necessary for learning, numerous studies of college classrooms reveal that we tend to lecture. In addition, students may be attending to lectures only about one-half of their time in class, and retention of information from lectures is low. Studies suggest our methods often fail to dislodge students' misconceptions and ensure learning of complex, abstract concepts. Capacity for problem solving is limited by our use of inappropriately simple practice exercises. Classroom tests often set the standard for student learning. As with instruction, however, we tend to emphasize recall of memorized factual information rather than intellectual challenge.

How hard do students work? Although quality of effort is key to accomplishment, studies consistently show students generally study far less than necessary to learn effectively. The limited evidence available on college outcomes reveals disappointing levels of student knowledge and skill.

How does the campus climate affect our students' development? The climate of a campus can welcome new students into what is for many an unfamiliar and threatening culture. In many cases, however, research reveals little student involvement with the faculty, staff, or other students, a climate of limited intellectual stimulation, and one that tolerates widespread cheating and alcohol abuse. Studies frequently reveal campus environments

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where women and minority group members are regularly devalued and overtly discriminated against.

How well do we guide our students' development? Academic advising is widely agreed by authorities to be a powerful tool for improving student success. Today, high-quality advising focuses on each student's specific developmental needs. High-quality advising is correlated with increases in students' self-esteem, satisfaction with college, and persistence in school. Yet national surveys reveal on most campuses, when it occurs at all, academic advising tends to be primarily clerical in character rather than developmental, focusing as it does on registration.

Can today's students learn? Given our students' diverse backgrounds, frequent underpreparation, and limited academic success, with about half withdrawing before graduation, some faculty believe many lack the ability to learn. However, in elementary and high schools, striking success with students of modest academic origins, and, in college, high-quality methods of instruction, both demonstrate students' potential for high achievement. The higher the quality of instruction, the lower the correlation between assessed student ability and the quality of their learning.

How can we improve the quality of the student outcomes we produce? Research now available on the student experience in colleges and universities shows we must make substantial changes if we are to serve society's needs for highly educated employees, citizens, and leaders. Significant steps we can take are to develop clear missions, carefully define our intended outcomes, hold high expectations for our students and ourselves, comprehensively assess both students and institutions, use research on student learning and organizations, integrate our curricula, systematically design instruction that will involve students actively at every point, teach students how to learn, develop a campus climate that challenges and supports each person, and ensure each student has high-quality developmental academic advising.

Our widespread problems in enabling all our students to succeed require vigorous, systemic responses. Research on student development, coupled with modern educational methods and quality improvement principles, can enable us for the first time in human history to educate all of the people to a high level. Graduate schools will have to provide thorough, demanding professional training as educators for the future faculty, and the current professoriate will require significant assistance in developing the diverse professional knowledge and skills now required to educate our students. Professionally prepared and accountable leadership and faculty can develop a more positive and supportive culture on campus, build community and improve faculty and staff morale, and produce the high quality results society now urgently needs and is asking us to provide.

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